

were observed near water. Other amphibian species that are typical to these terrestrial communities include American toad (*Bufo americanus*), green frog (*Rana clamitans*), bullfrog (*Rana catesbeiana*), and several salamander species (families *Ambystomatidae* and *Plethodontidae*).

3.4.2.4 Aquatic Communities and Wildlife

The proposed project is located in both the Neuse River and Cape Fear River Basins (Hydrologic Units 03020201 and 03030002, respectively). In the Neuse River watershed, waters drain to either Little Lick Creek or Goose Creek, both of which drain to Falls Lake. In the Cape Fear River basin, waters drain into either Third Fork Creek or Northeast Creek, both of which drain to Jordan Lake.

The aquatic communities either found within or running through each of the three alternatives include streams, man-made ponds, and associated jurisdictional wetlands. Vegetation along the larger streams and ponds included riparian species such as sycamore (*Platanus occidentalis*), river birch (*Betula nigra*), red maple (*Acer rubrum*), sweet gum (*Liquidambar styraciflua*), and ironwood (*Carpinus caroliniana*). Common tree species observed in jurisdictional wetlands include, but are not limited to, tulip poplar (*Liriodendron tulipifera*), American elm (*Ulmus Americana*), red maple (*Acer Rubrum*), sweet gum (*Liquidambar styraciflua*), black willow (*Salix nigra*), green ash (*Fraxinus pensylvanica*), and winged elm (*Ulmus alata*). Herbaceous and vine species observed include Japanese grass (*Microstegium vimineum*), poison ivy (*Toxicodendron radicans*), devil's beggartick (*Bidens frondosa*), spotted lady's thumb (*Polygonum persicaria*), marsh dewflower (*Murdannia keisak*), tearthumb (*Polygonum sagittatum*), cattail (*Typha latifolia*), camphorweed (*Pluchea camphorata*), soft rush (*Juncus effusus*), and various sedge species (*Carex spp.*).

Common amphibians within the study area's aquatic communities include gray treefrog, upland chorus frog, spring peeper, bullfrog, green frog, pickerel frog (*Rana palustris*), northern cricket frog (*Acris crepitans*), northern dusky salamander (*Desmognathus fuscus*), two-lined salamander (*Eurycea bislineata*), three-lined salamander (*Eurycea guttolineata*), eastern newt (*Notophthalmus viridescens*), marbled salamander (*Ambystoma opacum*), and spotted salamander (*Ambystoma maculatum*). Aquatic fauna include a variety of benthic macroinvertebrates including mayflies, stoneflies, caddisflies, dragonflies, damselflies, beetles, chironomid midges, crane flies, amphipods, isopods, and crayfish. The intermittent and smaller perennial streams most likely support only chironomid midges, beetles, oligochaetes, crayfish, isopods, and amphipods.

The North Carolina Department of Water Quality does not maintain a fish monitoring station on any surface waters within any of the three build alternatives. However, a sampling site for their Stream Fish Community Assessment Program exists along Ellerbe Creek (Station SR 1709, Neuse River Basin), approximately 1.5 miles north of the project. This site was sampled on April 11, 1995, and April 14, 2005. Common species observed during these surveys included satfin shiner (*Cyprinella analostana*), swallowtail shiner (*Notropis procne*), redbreast sunfish (*Lepomis auritus*), and green sunfish (*Lepomis cyanellus*). Two additional fish monitoring stations are located to the west of the project area in the Cape Fear River Basin, one along Hew Hope Creek (Station SR 2220) and the other along Third Fork Creek (Station NC 751). Station 2220 was last surveyed on May 3, 2003, and Station NC